

# Mathematics Assessment and Progress Monitoring Resources

## **General Assessment Resources**

<b>Curriculum Based Measurement Warehouse - Intervention Central</b>
<a href="http://www.interventioncentral.org/htmldocs/interventions/cbmwarehouse.php">http://www.interventioncentral.org/htmldocs/interventions/cbmwarehouse.php</a>
Collection of links to Mathematics and Reading Assessment and Progress Monitoring tools and information.
<b>National Center on Student Progress Monitoring</b>
<a href="http://www.studentprogress.org/chart/chart.asp">http://www.studentprogress.org/chart/chart.asp</a>
Chart with links and descriptions to many commercially available assessment programs in reading and math with cost per students included.
<b>Classroom Mathematics Inventory for Grades K-6: An Information Assessment</b>
Guillaume, Andrea, M. (2005) Pearson Education Inc.

## **Progress Monitoring and Assessment Resources**

**Assessment Name:** Assessing Math Concepts

**Author/Researcher:** Kathy Richardson

**Publisher:** Didax Educational Resources

**Link for more information:**

<http://www.didax.com/shop/searchresults.cfm/AuthorID/2/Sort/Item/Order/Asc/ShowAll/Yes.cfm>

<http://www.didax.com/AMC/overview.cfm>

**Audience:** K-3 students

**Format:** Individually administered

**Approx time per interview:** 2-8 minutes per assessment per student

**Cost Information:** \$175 for directions booklets for all nine assessments

Option to also purchase forms for recording (\$49.50 – 50 forms for each assessment in package)

**Description:**

Assessing Math Concepts is a nine part series of assessments (listed below) that focus on core concepts that must be in place if children are to understand and be successful in mathematics. The information that is gathered and organized helps the teacher's awareness of the important steps in the learning process and provides information for instructional decision making.

- Counting Objects
- Changing Numbers
- More/Less Trains
- Number Arrangements
- Combination Trains
- Hiding Assessment
- Ten Frames
- Grouping Tens
- Two-digit addition and subtraction

**Assessment Name: EN-CBM - Early Math Fluency Probe****Author/Researcher:** Clarke and Shinn**Publisher:** n/a**Link for more information:** Number Fly<http://www.interventioncentral.org/php/numberfly/numberfly.php#MN>**Audience:** K-2**Format:** Individually administered**Approx time per interview:** One minute probes**Cost Information:** n/a**Description:**

Brief Screening tools that provide measures on discrete aspects of numerical proficiency (Number Identification, Quantity Discrimination, Missing Number, Oral Counting). Fairly easy to administer and can be completed in a few minutes, can more easily be used school- or district-wide with large numbers of students. Measures could be used to quickly identify students whose mathematics achievement is either on track or at risk in one or more critical areas and prompt additional support, these brief measures cannot provide a full diagnostic profile. Directions and probe construction tool available online.

**Assessment Name: Curriculum Based Measurement Math Probes****Author/Researcher:** Fuchs (2006)**Publisher:** Vanderbilt University**Link for more information:**[http://www.studentprogress.org/library/Training/CBMmath/MathTrainingManual/CBMMa-nualMath\\_9-29-05.pdf](http://www.studentprogress.org/library/Training/CBMmath/MathTrainingManual/CBMMa-nualMath_9-29-05.pdf)**Contact Information:**

Lynn Fuchs, Peabody #328, 230 Appleton Place, Nashville, TN 37203-5721  
615-343-4782

**Audience:** 1-8**Format:** Group Administered**Approx time:** Computation Probes – 2-6 minutes, Concept and Application Probes – 6-8 minutes**Cost Information:** Copying Costs and Postage**Description:**

Probes are available for Computation as well as Concepts and Application for grades 1 through 8. 30 probes are available per grade level in each area (total of 60 probes). CBM materials were developed and researched using standard CBM procedures.

**Assessment Name: Early Math Measures****Author/Researcher:** Dr. Erica Lembke (lembkee@missouri.edu)**Publisher:** Research Institute on Progress Monitoring, University of Minnesota**Link for more information:**

[http://www.studentprogress.org/library/Training/CBMmath/MathTrainingManual/CBMMa  
nualMath\\_9-29-05.pdf](http://www.studentprogress.org/library/Training/CBMmath/MathTrainingManual/CBMMa<br/>nualMath_9-29-05.pdf)  
[www.progressmonitoring.org](http://www.progressmonitoring.org)

**Audience:** K-1**Format:** Individually administered**Approx time:** 1 minute per student (timed)

**Cost Information:** under development, assessments should be available for dissemination soon, contact Dr. Erica Lembke for information

**Description:**

Early number assessments administered in 1 on 1 interview setting. Probes include: Quantity Array, Number identification, quantity discrimination, missing number.

**Assessment Name: K-CBM (Kindergarten Curriculum Based Measurements)****Author/Researcher:** VanDerHeyden and Colleagues (2001)**Publisher:** n/a**Link for more information:** <http://www.gosbr.net/screening/>**Audience:** K**Format:** Group Administered**Approx time:** 1 minute (timed)

**Cost Information:** n/a

**Description:**

One minute group administered assessments for kinder. Two forms available for each test but similar assessments could easily be constructed for progress monitoring purposes.

- Write number probe
- Circle Number probe
- Draw Circles probe
- Add Circles Probe

**Assessment Name:** KeyMath 3 Diagnostic Assessment

**Author/Researcher:** Austin J. Connolly

**Publisher:** Pearson

**Link for more information:**

<http://ags.pearsonassessments.com/group.asp?nGroupInfold=aKeymath3>

**Audience:** 4.5 to 21 years of age (Grades K through 12)

**Format:** Individually Administered

**Approx time:** 30 to 90 minutes (approximate times, this is an untimed test)

**Cost Information:** \$699 for complete package with A and B assessment forms, Supplementary instructional materials or reporting software also available for additional cost

**Description:**

The *KeyMath 3 Diagnostic Assessment* (KeyMath 3 DA) is a comprehensive, norm-referenced measure of essential mathematical concepts and skills. Like previous versions of the widely used KeyMath assessments this addition to the KeyMath family is untimed and individually administered.

The items are grouped into 10 subtests that represent three general math content areas

- Basic Concepts (conceptual knowledge)
- Operations (computational skills)
- Applications (problem solving)

KeyMath 3 DA content covers the full spectrum of math concepts and skills that are typically taught in kindergarten through ninth grade and can be used with individuals aged 4½ through 21 years who are functioning at these instructional levels. It is available in two parallel forms, designated as Form A and Form B, each of which contains 372 full-color test items.

The KeyMath 3 DA provides a means of monitoring an individual's progress over time. It includes two parallel forms (Form A and Form B), which can be administered in alternating sequence every 3 months, as well as growth scale values (GSVs), which are a type of developmental scale score.

**Assessment Name:** Number Knowledge Test (NKT)

**Author/Researcher:** Okamoto and Case

**Publisher:** SRA McGraw Hill, Number Worlds

**Link for more information:** [http://clarku.edu/numberworlds/nw\\_TestInfo.htm](http://clarku.edu/numberworlds/nw_TestInfo.htm)

**Audience:** 4 different levels - 4, 6, 8, and 10 years old

**Format:** Individually administered

**Approx time:** 5 to 10 minutes per student for the kinder level

**Cost Information:** Contact for permission to use and cost structure.

**Description:**

The NKT takes time to administer, precluding its use as a brief screening measure for all students in a building. We envision its use only with students whom the more brief assessments described above indicated as being at risk, to help select appropriate instructional targets for intervention.

This measure has been used to chart children's developmental profiles of numerical competency (Okamoto & Case, 1996) and to study the effect of math instruction on kindergarteners from low-SES families (Griffin, 1998). The NKT test contains four levels, and students are required to obtain a minimum number of correct responses at one level to move to the next level. On Level 1, students are required to complete tasks such as counting chips and geometric shapes. Level 2 requires students to do tasks such as identifying bigger or smaller numbers from a pair, naming numbers, and solving simple addition and subtraction problems. Level 3 requires students to solve similar problems to those of Level 2, but with larger numbers. Level 3 also requires students to complete new items such as stating how many numbers are between a pair of numbers. Level 4 is a more difficult version of Level 3 and also adds new tasks such as telling which difference between two pairs of numbers is bigger or smaller.

**Assessment Name:** PASeries Mathematics (Program Assessment Series)

**Author/Researcher:** Pearson Education

**Publisher:** Pearson Education

**Link for more information:**

<http://ed.pearsonassessments.com/paseries/index.htm>

**Audience:** 3-8 – PASeries Mathematics and 6-12 PASeries Algebra I

**Format:** Group administered (can be administered on paper or online)

**Approx time:** administration time information not found

**Cost Information:** pricing information available upon request from publisher

**Description:**

PASeries (Progress Assessment Series®) (grades 3-12) is a set of scientifically based, pre-built formative assessments for reading, mathematics, writing and algebra that forecast growth.

- Provides online and/or paper screening tests, progress monitoring assessments and diagnostic tests for use throughout the school year.
- Applies the industry-standard Lexile® measurement scale for reading and the new Quantile® measurement scale for mathematics.
- Uses carefully selected and field-tested, research-based test items and self-contained tests to ensure the validity of growth forecasting.
- Reports by student, classroom, school, district and state, including sub-groups.

*PASeries Mathematics is an assessment for grades 3-8.*

- Screening test for placement
- Six progress-monitoring tests for each grade to measure progress toward grade level expectations and forecast performance on statewide tests
- Diagnostic tests by strand for targeting instruction
- Scientific measurement scales, including new Quantile® measures

*PASeries Algebra I is an assessment for grades 6-12.*

- Six progress-monitoring tests measure growth over time and forecast performance
- Five diagnostic tests - one in each content strand per grade - guide instructional support decisions by identifying student's strengths, weaknesses, and common errors within each of the five content strands
- Scientific measurement scales, including new Quantile measures

**Assessment Name:** Test of Early Numeracy-CBM

**Author/Researcher:** David Chard

**Publisher:** AIMSweb Progress Monitoring and Response to Intervention System

**Link for more information:**

<http://www.aimsweb.com/products/cbm/en-cbm/description.php>

**Audience:** K-1

**Format:** Individually administered

**Approx time:** 1 minute per student (timed)

**Cost Information:** School License for Benchmark Set - \$99, School License for Progress Monitoring Set - \$299, Technology tools also available – Web subscription \$2-4 per student

**Description:** AIMSweb® Test of Early Numeracy™ (TEN) includes measures for Oral Counting, Missing Number, Number Identification, and Quantity Discrimination.

Available as a benchmark set and/or progress monitoring set.

- AIMSweb Test of Early Numeracy (TEN) Benchmark Set: Grades K-1 Early Numeracy measures for establishing fall, winter, and spring benchmarks. Includes sets of 1 to 3 equivalent, valid and reliable probes per skill at each level, instruction manual and companion DVD. 18 total assessments.
- AIMSweb Test of Early Numeracy (TEN) Progress Monitor set: Grades K-1 Early Numeracy measures for frequent assessment and monitoring of at risk students. Includes 30 equivalent, valid and reliable probes per skill at each level, instruction manual and companion DVD. 180 total assessments.



**Assessment Name: Mathematics-CBM**

**Author/Researcher:** David Chard

**Publisher:** AIMSweb Progress Monitoring and Response to Intervention System

**Link for more information:** <http://www.aimsweb.com/>

**Audience:** 1-8

**Format:** Individual or Group Administration

**Approx time:** 2-4 minutes for each assessment

**Cost Information:** School License for Benchmark Set - \$99, School License for Progress Monitoring Set - \$299, Technology tools also available – Web subscription \$2-4 per student

**Description:** AIMSweb® Mathematics Curriculum-Based Measurement - Math Computation/ Math Facts

- Mathematics-CBM Benchmark Set: Grades 1-8 Math Computation Problems for establishing fall, winter, and spring benchmarks. Includes 10 Standard Math Computation assessments per level and instruction manual. Also includes 20 Math Computation assessments in an optional 'Answer and Process' format for Grades 5 and 6. 80 total assessments.
- Mathematics-CBM Progress Monitor Set: Grades 1-8 Math Computation and Facts Problems for frequent assessment and monitoring of at risk students. Includes 40 Standard Math Computation assessments per grade, and instruction manual. Also includes 80 Math Computation assessments in an optional 'Answer and Process' format for Grades 5 and 6 and 120 Math Facts assessments. 440 total assessments.